

WHAT IS CLAIMED:

1 1. A method for use in a node of a UMTS (universal mobile telecommunications
2 system) Terrestrial Radio Access Network (UTRAN) based network for exchanging data
3 with another node of the UTRAN based network, the method comprising the steps of:

4 formatting data into a UTRAN data frame, the UTRAN data frame comprising a
5 header portion, a payload portion for conveying the data and a quality of service (QoS)
6 field associated with the payload portion; and

7 transmitting the UTRAN data frame to the other node.

1 2. The method of claim 1 wherein the payload portion comprises a number of
2 dedicated channels (DCHs) and the QoS field, each dedicated channel comprising a
3 number of transport blocks (TBs), and wherein the header portion comprises a number of
4 transport format indicators (TFI) fields each associated with one of the number of DCHs,
5 each TFI indicating a size of one of the number of DCHs.

1 3. The method of claim 2 wherein the payload portion further comprises a payload
2 type indicator field.

1 4. The method of claim 1 wherein the QoS field is transmitted within the payload
2 portion.

1 5. The method of claim 1 wherein the UTRAN data frame further comprises a
2 payload type indicator field.

1 6. A method for use in a wireless network element, the method comprising the
2 steps of:

3 formatting data into a data frame, the data frame comprising a header portion, a
4 payload portion and a quality of service (QoS) field associated with the payload portion;
5 and

6 transmitting the data frame to another node of the wireless network.

1 7. The method of claim 6 wherein the payload portion comprises a number of

2 dedicated channels (DCHs) and the QoS field, each dedicated channel comprising a
3 number of transport blocks (TBs), and wherein the header portion comprises a number of
4 transport format indicators (TFI) fields each associated with one of the number of DCHs,
5 each TFI indicating a size of one of the number of DCHs.

1 8. The method of claim 7 wherein the payload portion further comprises a payload
2 type indicator field.

1 9. The method of claim 6 wherein the QoS field is transmitted within the payload
2 portion.

1 10. A transmission frame representing data embodied in a wireless transmission
2 signal, the transmission frame comprising:

3 a payload portion comprising at least one dedicated transport channel (DCH)
4 portion, wherein the at least one DCH portion further comprises a number of transport
5 blocks (TB) for conveying data; and

6 a header comprising at least one transport format indicator (TFI) field for the at
7 least one DCH portion, wherein a value of the TFI field represents a size of the at least
8 one DCH; and

9 a quality of service (QoS) field associated with the payload portion.

1 11. The transmission frame of claim 10 wherein the QoS field is transmitted within
2 the payload portion.

1 12. The transmission frame of claim 10 wherein the payload portion further
2 comprises a payload type indicator field.

1 13. Apparatus for use in a wireless network element, the apparatus comprising:

2 a formatter for forming a data frame, the data frame comprising a payload portion
3 comprising at least one dedicated transport channel (DCH) portion, wherein the at least
4 one DCH portion further comprises a number of transport blocks (TB) for conveying data,
5 and a header portion comprising at least one transport format indicator (TFI) field for the
6 at least one DCH portion, wherein a value of the TFI field represents a size of the at least

7 one DCH; and a quality of service (QoS) field associated with the payload portion; and
8 a radio frequency transmitter for transmitting the data frame to another wireless
9 network element.

1 14. The data frame of claim 13 wherein the QoS field is transmitted within the
2 payload portion.

1 15. The transmission frame of claim 13 wherein the payload portion further
2 comprises a payload type indicator field.